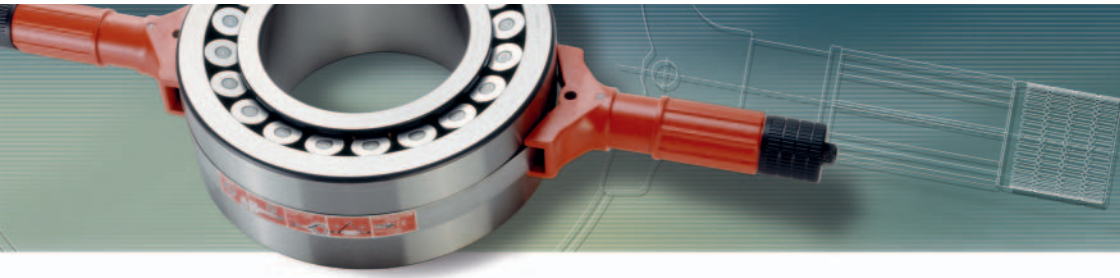
FAG



BEARING-MATE
Mounting and Carrying Tool
User Manual

SCHAEFFLER

Warning and hazard symbols

The warning and hazard symbols are defined along the lines of ANSI Z535.6–2006.

The meaning of the guidelines and symbols is as follows:

⚠ Warning

If these safety guidelines are not observed, death or serious injury may occur.

! Attention

If these safety guidelines are not observed, damage or malfunctions in the product or the adjacent construction will occur.

Original user manual

This user manual is the original user manual in accordance with the Machinery Directive 2006/42/EC.

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Description

Intended purpose

The mounting and carrying tool BEARING-MATE was developed in order to allow easier transport and mounting of heavy rotationally symmetrical parts such as rolling bearings.

Scope of delivery

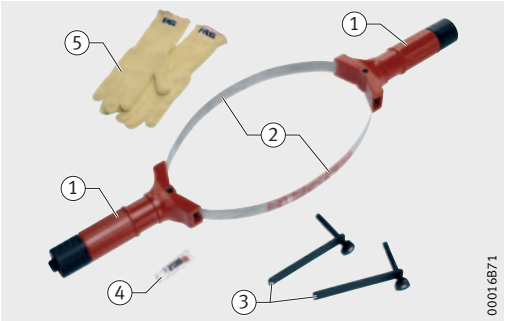
Transport and mounting strip ① + ②, this user manual, two short retaining brackets ③, grease ④ and gloves ⑤.

Features

The BEARING-MATE comprises:

- two aluminium handles ①
- two steel strips ②.

After mounting, the bearing and BEARING-MATE form a unit, ⑥. The two opposing handles allow secure lifting and transport of the bearing.



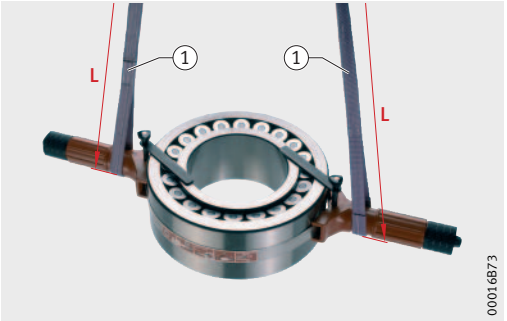
Description

In order to transport the unit comprising the bearing and BEARING-MATE by means of a crane, two suitable carrying slings of equal length should be used, ①.

Handling

Before mounting, the unit can be rotated while it is suspended in the carrying slings.
In this case, the handles form the axis of rotation.
The BEARING-MATE can thus be used for the whole handling procedure, from transport through to mounting.

If the bearing is to be heated using an induction heating device, it is not necessary to remove the BEARING-MATE.



Application

Correct usage

BEARING-MATE should only be used by authorised personnel. Before any such use, this manual should be read.

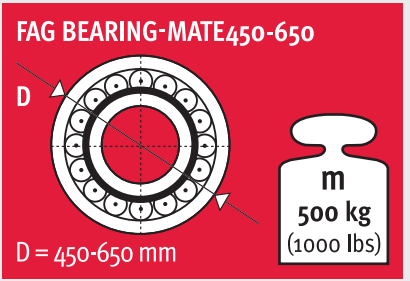
Suitable bearings

⚠ Warning

Observe the maximum mass (m) and permissible outside diameter (D), see label. Ensure that the outer ring is clean and free from grease and oil.

Further specifications:

- cylindrical outside surface
- non-separable bearing
- width of outer ring at least 60 mm
- width of outer ring no more than 270 mm in the case of spherical roller bearings and self-aligning ball bearings, use long retaining brackets.



Application

Inspection and cleaning

⚠ Warning

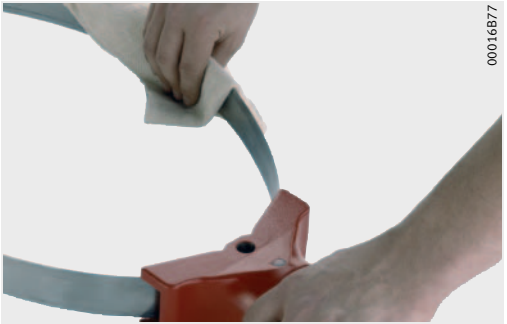
Do not use BEARING-MATE if it is damaged.

- Before each use, inspect the steel strips and handles for cracks, fractures, deformation, bends, notches, corrosion, wear etc.
- If the steel strips or handles are damaged, the complete tool must always be sent to Customer Services. E-mail, see Page 16.

! Attention

All labels must be present and easily legible, see Page 16.

- Extend the steel strips to their maximum length and clean thoroughly.



Application

Cleaning of bearings

⚠ Warning

Bearings with an oily outer ring may slip out of the BEARING-MATE. Ensure that the outer ring is dry.

Clean the bearing outer ring:

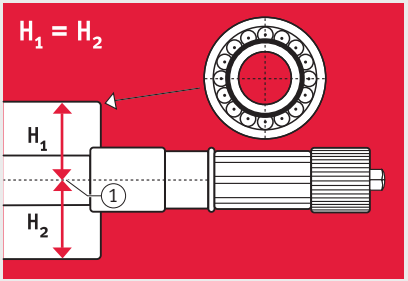
- Remove grease and oil as well as any foreign matter from the outer ring.

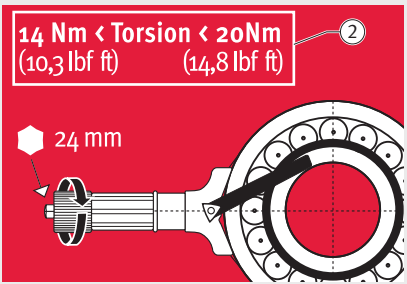
Application

Mounting

After cleaning the BEARING-MATE and outer ring, mount the BEARING-MATE:

- Place the steel strips centrally on the outer ring, see label ①.
- Rotate the ends of the handles uniformly in a clockwise direction by hand until the steel strips are firmly in contact with the bearing and are pulled in to the same extent, observing the distances between the label and the ends of the handles.
- Tighten the screw heads on the ends of the handles, observing the correct tightening torque as stated on the label ②.





Application

Mounting the retaining brackets

In the case of spherical roller bearings and self-aligning ball bearings, the inner ring must be secured in place.

! Attention

The retaining brackets must not extend beyond the inner ring and must both be fitted on the same side.

Secure the inner ring:

- The bearing outer ring is marked on one side. Insert both retaining brackets on this side.
- Align the retaining brackets parallel until they are in contact with the inner ring.
- Tighten the retaining brackets.

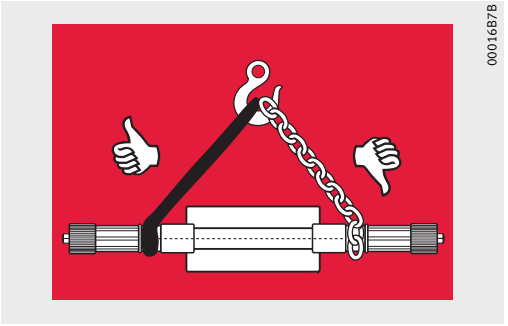
Application

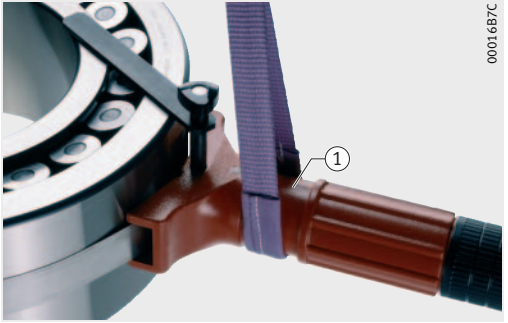
Fitting the carrying slings

⚠ Warning

For transport by means of a crane, use two carrying slings of equal length. Ensure that each carrying sling has a carrying force of at least 1000 kg. Chains must not be used, see label.

- Position the carrying slings between the contact face and the flange, ①.
- Support the carrying slings on a crane hook.





Application

Transport

⚠ Warning

Apply additional means of support (securing belt, carrying force at least 1000 kg), ①.

Ensure that nobody is underneath the bearing at any time during transport.

Secure the hazard area. Transport the bearing without shocks or vibration.

- Transport the bearing to the mounting location.

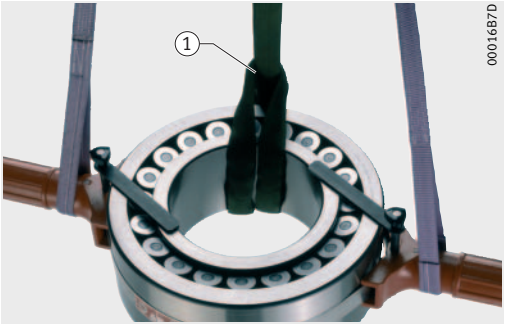
Mounting of bearings

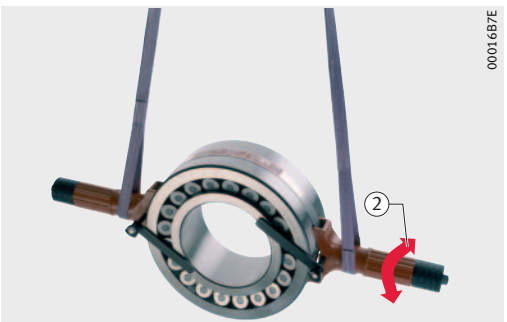
- Rotate the bearing at the mounting location if necessary, ②. The handles serve as the axis when rotating the bearing.

! Attention

Ensure that the retaining brackets do not protrude beyond the inner ring.

- Mount the bearing.
- Remove the retaining brackets.
- Loosen the handles and remove the BEARING-MATE.

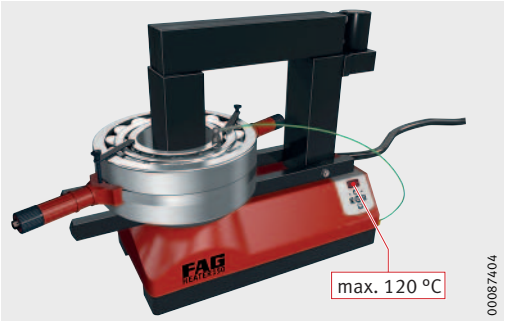




Application

Heating of bearings

- Place the bearing with the BEARING-MATE still mounted on the FAG induction heater.
- Heat the bearing inner ring to a maximum of +120 °C.
- After heating, ensure that the torque is 14 Nm to 20 Nm using a torque wrench.



Inspection and maintenance

Inspection

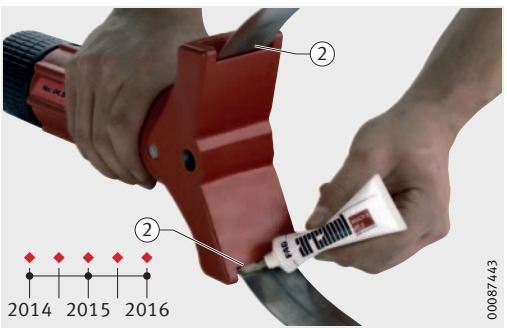
The BEARING-MATE must be inspected at least once per year. The first inspection should be carried out one year after manufacture. If the relevant regulations require more frequent inspection, match the inspection period to the relevant regulations.

- Inspection must only be carried out by authorised personnel.
- Check the date of manufacture, ①. 13.06 indicates the year 2013, week 6.
- Inspect the tool in the same way as before each use and in accordance with local regulations.
- Prepare and archive an inspection record: date of inspection, results (free from defects or description of any defects), name and position of the inspector.

Maintenance

Maintenance is a precondition for low wear.

- Every 6 months, lubricate the strips at the 4 entry points using Arcanol MULTI2, ②.



Appendix

Technical data

BEARING-MATE	
Mass	6,3 kg
Load carrying capacity	500 kg
BEARING-MATE250-450	
Minimum diameter	250 mm
Maximum diameter	450 mm
BEARING-MATE450-650	
Minimum diameter	450 mm
Maximum diameter	650 mm
BEARING-MATE650-850	
Minimum diameter	650 mm
Maximum diameter	850 mm

Conversion, repair

Any modifications such as conversion or incorrect repair of the BEARING-MATE can lead to hazards for the user.

⚠ Warning

The BEARING-MATE must not be modified; conversion and repair are not permissible.

Repairs may only be carried out by FAG Customer Services.

Certificates

The BEARING-MATE has been inspected by TÜV Product Service GmbH. A copy is available on request.

Appendix

Declaration of Conformity

A copy of the EG Declaration of Conformity in original size is available on request.

Contact

E-mail: support.is@schaeffler.com

GB

EG Declaration of Conformity

In accordance with EG Machinery Directive 2006/42/EG

We hereby declare that the product described below is in conformity with the applicable health and requirements of the EG Directive in terms of its design and type and in the execution we have brought into circulation.
This declaration shall cease to be valid if any modification is made to the product without our agreement.

Product description:	FAG Mounting and carrying tool
Product name:	BEARING-MATE
Type:	250-450; 450-650; 650-850

Applicable harmonised standards:

EN 13155	Cranes, safety, non-fixed load lifting attachments.

Signatures:

Schaeffler Technologies GmbH & Co. KG
Services Industrial Aftermarket, FIS
Georg-Schäfer-Str. 30
97421 Schweinfurt

i.V. A. Kempkes
Dipl. Ing. Armin Kempkes
Vice President Services Industrial Aftermarket
Schaeffler Group Industrial

i.V. Paul Königer
Paul Königer
Product Manager
FIS Maintenance Tools

Date:
Schweinfurt, 28.04.2010

This declaration certifies conformity with the stated directives but does not represent a guarantee of characteristics.
The safety guidelines in the user manual must be observed.

Schaeffler Technologies GmbH & Co. KG, Georg-Schäfer-Straße 30, D-97421 Schweinfurt, Tel.: +49 2407 9149-99

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Appendix

Accessories and spare parts

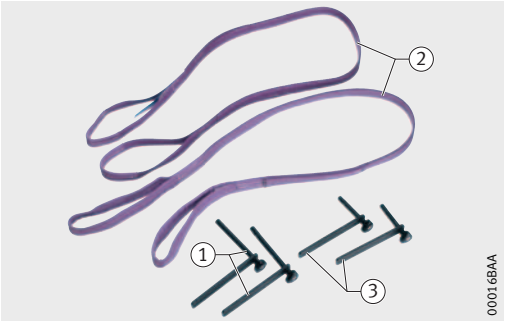
FAG Service offers accessories and spare parts worldwide for the BEARING-MATE.

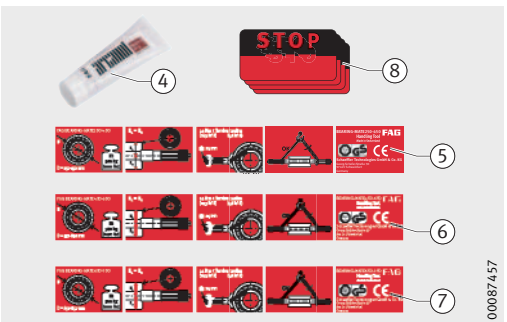
Accessories:

- Two long retaining brackets, ①.
  Ordering number: BEARING-MATE.LOCKBAR270.
- Two carrying slings, length each 1 m, ②.
  Ordering number: BEARING-MATE.SLING-1M.

Spare parts:

- Two short retaining brackets, ③.
  Ordering number: BEARING-MATE.LOCKBAR170.
- Service kit.
  Ordering number: BEARING-MATE.SERVICE-KIT.
  - One 20 g tube of Arcanol MULTI2, ④ (can also be ordered separately: ARCANOL-MULTI2-20G).
  - Two pictogram labels each for
    BEARING.MATE250-450 = ⑤
    BEARING.MATE450-650 = ⑥
    BEARING.MATE650-850 = ⑦
  - Four labels ⑧ End of strip pull-in.





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